

## Functional Area 5.8

### SURFACED AREA MAINTENANCE

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#### List of Technical Exhibits

<u>Exhibit Number</u>	<u>Title</u>
5.8-001	Contract Data Requirements Lists (CDRLs)
5.8-002	Inventory of Surfaced Areas
5.8-003	Maintenance Level Classifications
5.8-004	Street Sweeping Areas and Frequencies
5.8-005	Grading Areas and Frequencies
5.8-006	Snow Removal Areas and Response Times
5.8-007	Historical Snowfall Data

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## **Functional Area 5.8**

### **SURFACED AREA MAINTENANCE**

#### **5.8.1 INTRODUCTION**

The Contractor shall perform maintenance and repair of surfaced areas, including roadways, parking lots, trails, widened shoulders, gravel and earth surfaced areas, bridges, and associated structures and appurtenances at Fort Lee. The Contractor shall perform maintenance and repair of approximately 2,713 of square yards of surfaced areas. All work shall be performed by qualified personnel in accordance with applicable laws, regulations, documents in Section C-6, and Government developed annual and long range plans. Technical Exhibits provide expanded information for this Functional Area.

#### **5.8.2 SCOPE OF SERVICES**

##### **5.8.2.1 Work Area/System Description**

Surfaced areas covered under this Contract include, but are not limited to, the following:

- Paved and unpaved roadways
- Paved and unpaved parking areas
- Sidewalks
- Curbs
- Vehicle storage and staging yards
- Maintenance yards
- Supply yards

##### **5.8.2.2 Work Management and Control**

5.8.2.2.1 Reporting Requirements. The Contractor shall prepare, submit, and maintain all records and reports as specified herein and in accordance with the Contract Data Requirements Lists (CDRLs) in Technical Exhibit 5.8-001.

5.8.2.2.2 Publications and Forms. Specific publications and forms required for the accomplishment of work described in this Functional Area are listed in Section C-6.

5.8.2.2.3 Safety. Slow moving equipment used on roads that may create an unsafe condition shall be equipped with rotating or flashing amber lights. The Contractor personnel performing services on or adjacent to roadways shall be equipped with reflectorized vests. The Contractor personnel acting as road guides shall carry an 18" square flag or reflectorized material, yellow-orange in color. During hours of darkness, road guides shall also be equipped with a red light capable of being seen by approaching motorists from a distance of at least 50 - 100 yards. Guides shall be instructed in the correct method of rendering hand signals.

5.8.2.2.4 Traffic Flow. The Contractor shall maintain the free flow of traffic during paving repairs through the use of traffic control methods or devices, including

flagmen, traffic cones, detour signs, signal devices, and flashers. The Contractor shall notify the COR in writing a minimum of fourteen days in advance of any scheduled or potential disruption of traffic flow, including closure of streets (CDRL 508R001).

### 5.8.3 SCHEDULED TASKS

The Contractor shall perform the tasks below on a recurring or scheduled basis and record the work under approved Standing Operating Orders (SOOs). Preventive maintenance and other scheduled tasks frequencies that apply to this Functional Area are presented in Technical Exhibits 5.8-004 and 5.8-005.

#### 5.8.3.1 Paved Surface Sweeping and Cleaning

The Contractor shall provide sweeping services for scheduled removal of dirt and debris from paved vehicular surfaces, parking areas, and pedestrian walks throughout the base. A list of streets and areas to be swept and the interval at which they are to be swept, based on their maintenance level, is presented in Technical Exhibit 5.8-004. The Contractor shall sweep all specified paved surfaces (e.g., roads, road shoulders, parking lots, and pedestrian walkways) with a broom-type sweeper. A properly swept surface is that resulting from a single-pass of a properly operating mechanical broom-type sweeper over an area receiving normal sweeping maintenance and not covered with unusual spills or debris deposits. The Contractor shall also manually clean sidewalks, gutters, storm drains, and other areas inaccessible to mechanical sweepers associated with the above listed paved surfaces to remove rock, sand, dirt, and debris. All debris and litter collected by the street sweeper shall be disposed of by the end of the same working day at the solid waste facility. The Contractor shall use high-pressure water wash-down methods when necessary to meet appearance requirements.

#### 5.8.3.2 Maintenance of Gravel and Earth Surfaced Areas

The Contractor shall perform maintenance, grading, and other services for gravel and earth surfaced areas. The Contractor shall perform maintenance and repair as required of approximately 72,677 square yards of gravel and earth surfaced roads and approximately 1,486,167 square yards of parking lots. Areas to be graded on a regular basis and their frequencies are presented in Technical Exhibit 5.8-005.

5.8.3.2.1 Roads and Lots. The Contractor shall maintain gravel and other earth surfaced roads, access roads, driveways, and parking lots by blading or dragging the surface until all ruts, holes, and washboards are filled. The surface shall be shaped to maintain a smooth riding surface and a uniform crown that permits proper drainage, without ponding of water. The Contractor shall maintain earth shoulders and cut and fill down slopes to allow surface drainage and to protect road edge and control erosion. Soil stabilization and vegetation practices shall be performed as required to prevent erosion. Undesirable vegetation shall be controlled within 15 feet of the pavement edge.

### 5.8.4 UNSCHEDULED TASKS

The Contractor shall perform corrective actions as needed to surfaced areas, including but not limited to: adding dirt and gravel to roadways and parking areas, repaving shoulders, regrading, repainting, repairing potholes, clearing drainage areas, and repairing guardrails.

The Contractor shall maintain and repair all paved surfaces, including flexible and rigid pavements, paved roads, paved parking areas, sidewalks, recreational areas, road shoulders, drainage systems, ramps, bridge surfaces, curbs, gutters, manhole surfaces, erosion control areas, and appurtenances. All work shall be accomplished upon receipt of a valid work document.

#### **5.8.4.1 Paint Removal and Application on Surfaced Areas**

5.8.4.1.1 Paint Removal on Surfaced Areas. Prior to application of paint, the Contractor shall remove existing paint from surfaced areas. This includes, but is not limited to: all street and curb markings, special parking markings, road speed limits painted on the surfaces, caution lines, yield lines, or directional markings. The Contractor shall test the removed paint for lead. If lead is present, the Contractor shall report the results to the Environmental Section.

5.8.4.1.2 Road Striping. The Contractor shall paint all paved roads identified on the inventory of surfaced areas in Technical Exhibit 5.8-002. Road striping shall conform to the Virginia Department of Transportation (VDOT) Road and Bridge Specification and the VDOT Road and Bridge Standards in regard to surface preparation, paint application, and markings. Road striping includes, but is not limited to: all curb markings, special parking markings, road speed limits painted on the surfaces, caution lines, yield lines, directional markings, or road beading. The Contractor shall be responsible for putting up and removing any necessary safety and closure barriers (e.g., cones and signs). The Contractor shall notify the COR prior to performing work which requires closure of a street. The Contractor shall also block out white and yellow lane markings on paved roadways when no longer required by applying an asphalt emulsion oil with sand to existing asphalt surfaces.

5.8.4.1.3 Parking Lot Painting. The Contractor shall paint all parking lots identified on the inventory of surfaced areas in Technical Exhibit 5.8-002. Parking lot painting shall conform to the VDOT Road and Bridge Specification and the VDOT Road and Bridge Standards in regard to surface preparation, paint application, and markings. The Contractor shall install and maintain stop blocks in parking lots. Parking space lines, directional arrows, and other markings shall be repainted as required to ensure clear visibility. The Contractor shall be responsible for putting up and removing any necessary safety and closure barriers (e.g., cones and signs).

5.8.4.1.4 Crosswalk Painting. The Contractor shall paint crosswalks identified on the inventory of surfaced areas in Technical Exhibit 5.8-002. Crosswalk painting shall be performed semi-annually in accordance with the Service Plan. Crosswalk painting shall conform to the VDOT Road and Bridge Specification and the VDOT Road and Bridge Standards in regard to surface preparation, paint application, and markings. The Contractor shall be responsible for putting up and removing any necessary safety and closure barriers (e.g., cones and signs).

#### **5.8.4.2 Maintenance and Repair of Bituminous and Cement Concrete Pavements**

All repair work shall be performed in accordance with established approved plans, AR 420-72, TM 624, and TM 5-822-7. Items to be maintained include, but are not limited to, plant-mix cold-laid, plant-mix hot-laid, sand asphalt, sand tar, rock asphalt, and bituminous penetration macadam. The Contractor shall maintain paved surfaces of all types in a good state of repair with uniformity in appearance, at the original alignment

and elevation, and free of damage, vegetation, potholes, scaling, spalls, surface breaks, and cracks. In order to provide smooth and safe surfaces, the Contractor shall maintain surfaces to be free of potholes and depressions deeper than 3/4" that pond water.

5.8.4.2.1 Spot Repair. The Contractor shall repair potholes, upheavals, and eruptions of asphalt around fire plugs, in asphalt drainage ditches, and on all bituminous surfaced areas. The Contractor shall repair, replace, and clean up cracks, grade depressions, upheavals, utility cut depressions, potholes of various sizes, raveling, bleeding, channel ruts, corrugation and shoving, fuel spillage, poor drainage, weathering, construction deficiencies, poor bituminous materials, aggregate deficiencies, overheating, improper mixing of material, poor proportioning, placement errors, plant mixed materials, and aggregate surfaces, subgrades, sub-bases, and base.

5.8.4.2.2 Shoulders. The Contractor shall maintain and repair road shoulders to protect the basic pavement structure, eliminate traffic hazards, and ensure proper drainage. The Contractor shall accomplish this requirement by leveling ruts and washes, filling in low areas, and cutting down high areas to achieve proper grade and slope. The Contractor shall revegetate the disturbance in accordance with the Fort Lee Integrated Natural Resources Management Plan. The Contractor shall maintain all roadsides and intersections to ensure unobstructed visibility of all signs, markers, guardrails, and fire hydrants.

#### **5.8.4.3 Utility Cuts**

The Contractor shall perform utility cuts in pavements as required to repair existing utilities or to install new service. Appropriate lighted barricades and construction fencing shall be used on open cuts. The Contractor shall repair utility cuts using materials with the same physical qualities as adjacent undisturbed areas in accordance with TM 5-818-4.

#### **5.8.4.4 Maintenance and Repair of Barriers**

5.8.4.4.1 Guardrails. The Contractor shall repair and replace damaged guardrails and guardrail posts with new materials that match existing materials. The Contractor shall install guardrails along roads where hazardous conditions exist.

5.8.4.4.2 Barricades and Lighting Devices. The Contractor shall install, replace, remove, and inspect permanent and mobile barricades (types I, II, III) cones, drums, vertical panels, and lighting devices which warn drivers of hazards created by construction, maintenance, and storm damage in or near traveled areas and which guide and direct drivers safely past the hazards.

5.8.4.4.3 Bumper Blocks. The Contractor shall install, replace, remove, and inspect concrete, plastic, wood, and metal bumper blocks used in parking areas, roadways, hazardous areas adjacent to buildings, signs, and fences to keep vehicles from protruding past the designated parking boundaries.

#### **5.8.4.5 Construction of New Surfaces**

The Contractor shall construct new graveled areas. Work shall include, but not be limited to, the following:

- widening or lengthening surfaced areas
- relocating roads
- installing additional appurtenances and associated structures (bridges, drainage structures, subgrade, sub-base, base, and compaction).

#### **5.8.4.6 Snow and Ice Removal**

The Contractor shall perform the snow removal task as outlined in the Fort Lee Snow Removal Plan.

5.8.4.6.1 Snow and Ice Removal Areas. The Contractor shall remove and control snow and ice from all roads, parking areas, sidewalks, steps, and other areas as identified in Technical Exhibit 5.8-006. The Contractor shall haul snow to on-installation locations and deposit it as necessitated by accumulation and directed by the COR.

5.8.4.6.2 Work Commencement. The Contractor shall begin snow and ice removal control activities when the snow or ice accumulation has reached 1" or within one hour of notification by the COR. Response is considered satisfactory when the Contractor is actively performing services within the specified work commencement criteria. For storms having a total accumulation of less than 1", the Contractor shall receive notification by the COR before commencing snow or ice removal services.

5.8.4.6.3 Inoperable Vehicles. The Contractor shall remove all vehicles interfering with snow and ice removal control operations to a location as designated by the COR or his authorized representative. The Contractor shall use a tow-truck to remove vehicles and shall use reasonable care to prevent damage to vehicles. The Contractor shall assume liability for damage to vehicles brought on by Contractor employee negligence.

5.8.4.6.4 Helipad. The Contractor shall give priority to clearing the helipad. The Contractor shall use urea for deicing on the helipad. The Contractor shall conduct deicing no more than 90 minutes prior to arrival or departure of the helicopter, and clear snow and ice as required to provide safe access to the helipad.

5.8.4.6.5 Provide Access to Buildings. The Contractor shall perform snow and ice removal to provide and maintain safe access to buildings. The Contractor shall perform deicing services to maintain free from hazard sidewalks, steps, ramps, and access to critical facilities specified in Technical Exhibit 5.8-006 and for all other facilities as directed by the COR. The sidewalks to and entries of the major buildings at the Installation shall be cleared of snow and ice to curbside.

5.8.4.6.6 Maximum Accumulations. The Contractor shall continue snow removal operations in order to ensure that snow accumulation does not exceed 2" on primary, secondary, or all other roads.

5.8.4.6.7 Completion Criteria. The Contractor shall cease snow removal activities only when the snowfall has ended and all areas for which the Contractor is responsible have been cleared and sanded. The Contractor shall ensure that snow and ice removal control services are completed within eight hours after the storm has ended. Snow removal will be considered complete when the following conditions have been met for designated areas:

- a. Less than 1/2" of snow remains on the entire area, including hard-packed snow or snow and ice.
- b. Snow is removed from the full width of streets, sidewalks, and steps with no intervening snow at street intersections or parking area entrances to all buildings.
- c. Snow has been removed from the full width of parking areas and pushed to designated locations.
- d. Sand has been spread to all roads, parking areas, sidewalks and steps as required or directed by the COR.

5.8.4.6.8 Snow Stakes/Markers. Snow stakes/markers shall be placed in areas to prevent snow removal operators and equipment from potentially hazardous situations (i.e., near electrical equipment, potholes, and curbs) or as directed by the COR. Stakes/markers shall be strategically placed and visible to the snow operators at all times.

5.8.4.6.9 Historical Snowfall. Snowfall data for fiscal years 1996 and 1997 experienced at Fort Lee is provided in Technical Exhibit 5.8-007.



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